

# Medical Schools of the West

## The University of California, San Diego, School of Medicine

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**T**he San Diego Campus of the University of California (UCSD) grew out of the world-renowned Scripps Institution of Oceanography located in La Jolla, which has been part of the University of California system since 1912. Under the leadership of Roger Revelle, a Graduate School of Science and Engineering was established in 1960 and plans for a general campus at San Diego were adopted by the regents in 1963.

At about the same time, the state legislature was considering locations for establishing additional medical schools in response to a perceived need for more physicians in California. Aggressive lobbying by the San Diego medical and business communities coupled with demographic imperatives resulted in the regents selecting San Diego as a site for a new medical school. This was reaffirmed by the legislature in 1958. Coincidentally, the county of San Diego was planning to rebuild the county hospital and expressed strong interest in a university affiliation. Despite a major external committee report that advocated locating the school at the county hospital site, 14 miles from the main campus, in 1962 the regents approved a plan for basing the school on the campus, believing it would thrive best in the exciting scientific environment already present and growing rapidly at the La Jolla site. This plan included the development of a campus hospital and a long-range commitment to the use of the county hospital. The first dean of the new school was appointed in 1964. In 1966 an operating agreement with the county of San Diego was signed that insured the use of the new county hospital by the university, with full operating control vested in the university. The charter class of 47 medical students was admitted in fall 1968 as the school's first building was nearing completion.

During the school's formative years in the middle and late 1960s, optimism ran high for the new univer-

sity and the new school. The national and state economies were booming, biomedical research for each new medical school was the order of the day and prospects for construction funds and relatively small student-faculty ratios appeared bright. In keeping with the philosophy of the developing campus, recruitment proceeded from the top down. That is, stellar physician-scientists were recruited as department chairpersons as sights were set on creating an outstanding medical school from the very beginning instead of achieving this goal gradually by evolution. To paraphrase Dr Clifford Grobstein, dean from 1967 to 1972, the stars were the target. Although not all expectations were fulfilled, we gained much more than a cautious strategy would have yielded.<sup>1</sup>

An unusual organizational structure that has survived to the present was chosen for the new school. The decision was made that there would be no separate basic science departments in the School of Medicine. Instead, faculty members in relevant general campus departments such as biology, chemistry and sociology are supported by the School of Medicine and participate fully in the school's curriculum and other activities. At the same time, expanded clinical departments were charged with the major responsibility for pre-clinical teaching and were staffed accordingly. The nine original School of Medicine departments were Community Medicine (since renamed Community and Family Medicine), Medicine, Neurosciences, Pathology, Pediatrics, Psychiatry, Reproductive Medicine, Radiology and Surgery. The Department of Anesthesiology was added in 1974 and the Department of Ophthalmology in January 1983. This complement of 11 departments contrasts with 19 to 25 at our sister medical schools in the University of California system.

A system of strong faculty governance assured ample faculty input into the curriculum. The curriculum that was developed was relatively unusual for the time, and

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has remained intact with only minor modifications. It includes cell biology and biochemistry, organ physiology and pharmacology, basic neurology, anatomy, pathology, social and behavioral sciences and introduction to clinical medicine in the first two years (Figure 1). The unusual placement of anatomy in the second year, coupled with its teaching by surgery and radiology faculty, created much distress in anatomy circles but has worked out exceedingly well. Although doubts were expressed that physiology and pharmacology could be taught in a single course, utilizing primarily clinically oriented faculty, this innovation has been successful. Traditional clerkships are offered in the third year, and the fourth year is devoted to electives (as well as a significant portion of the first two years). As part of the elective program, students select an area of concentration tailored to each student's interests and supervised by a small faculty group. The concentration area culminates in a written thesis or equivalent scholarly accomplishments such as films, books and new courses.

To enhance student-faculty interaction, reduce stress on students and inculcate a spirit of self-learning as opposed to cramming for examinations, a pass-fail system of grading augmented with narrative performance evaluations was instituted for each course.

Strong student sentiment against ranking, honors and the development of academic honor societies such as Alpha Omega Alpha persists.

### The 1970s—A Decade of Growth

The 1970s were a time of rapid growth of the school. By the end of the decade the faculty included more than 400 full-time faculty members and 1,300 voluntary clinical faculty members. Teaching and research facilities were constructed on the La Jolla campus and at the UCSD Medical Center—the renamed San Diego County Hospital. Extensive physical improvements were carried out at the medical center such as converting large wards to semiprivate and private rooms, major expansions of all diagnostic capabilities and construction of an outpatient wing. In addition, several tertiary referral services were developed, including a trauma center, burn unit and neonatal intensive care unit. Services were also developed to cover the full gamut of primary and secondary patient care needs. In 1972 the new 600-bed Veterans Administration Hospital opened adjacent to the School of Medicine facilities on land provided by UCSD on the La Jolla campus (Figure 2).

Unlike most large West Coast communities, San Diego had a dearth of house-staff training programs

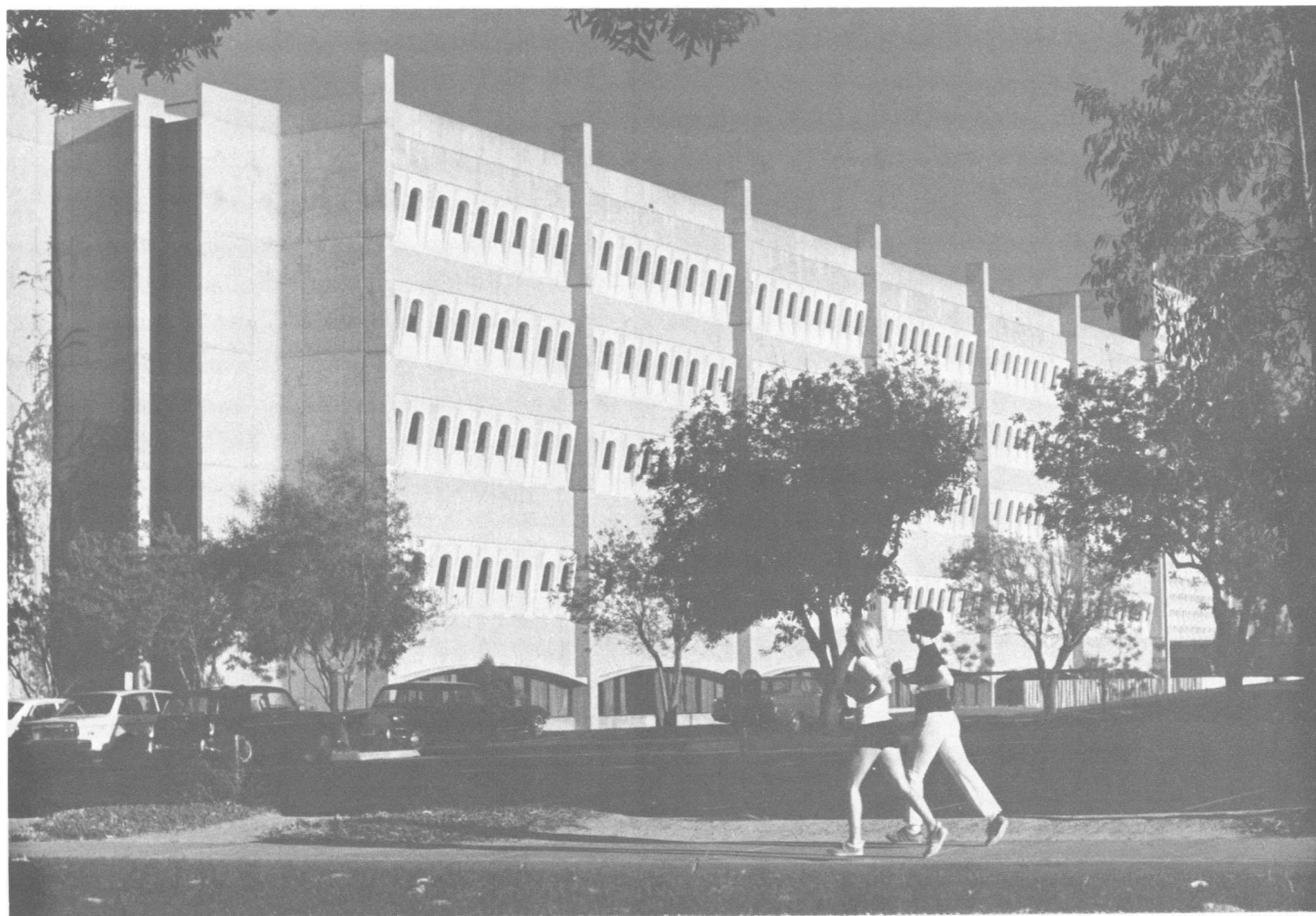


Figure 1.—The Basic Sciences Building, UCSD School of Medicine.

when the school began its operations. A broad spectrum of programs existed at Balboa Naval Hospital and there were several small programs at Mercy Hospital. House-staff training at the new Veterans Administration Hospital was fully integrated into University Hospital training programs. The school developed major affiliations for training of its house staff and medical students at Mercy Hospital, Balboa Naval Hospital and Children's Hospital and Health Center. Important but less extensive affiliations were effected with Kaiser Permanente Hospital, Sharp Memorial Hospital, Green Hospital of Scripps Clinic, City of Hope (Los Angeles), Kern Medical Center (Bakersfield, California) and Tuba City (Arizona) Indian Hospital. A variety of community clinics and physician preceptors are also integral to clinical training activities. In addition to pursuing their studies in San Diego, most students elect to gain some clinical experience in other medical centers both here and abroad. A sizable number pursue special projects in developing countries.

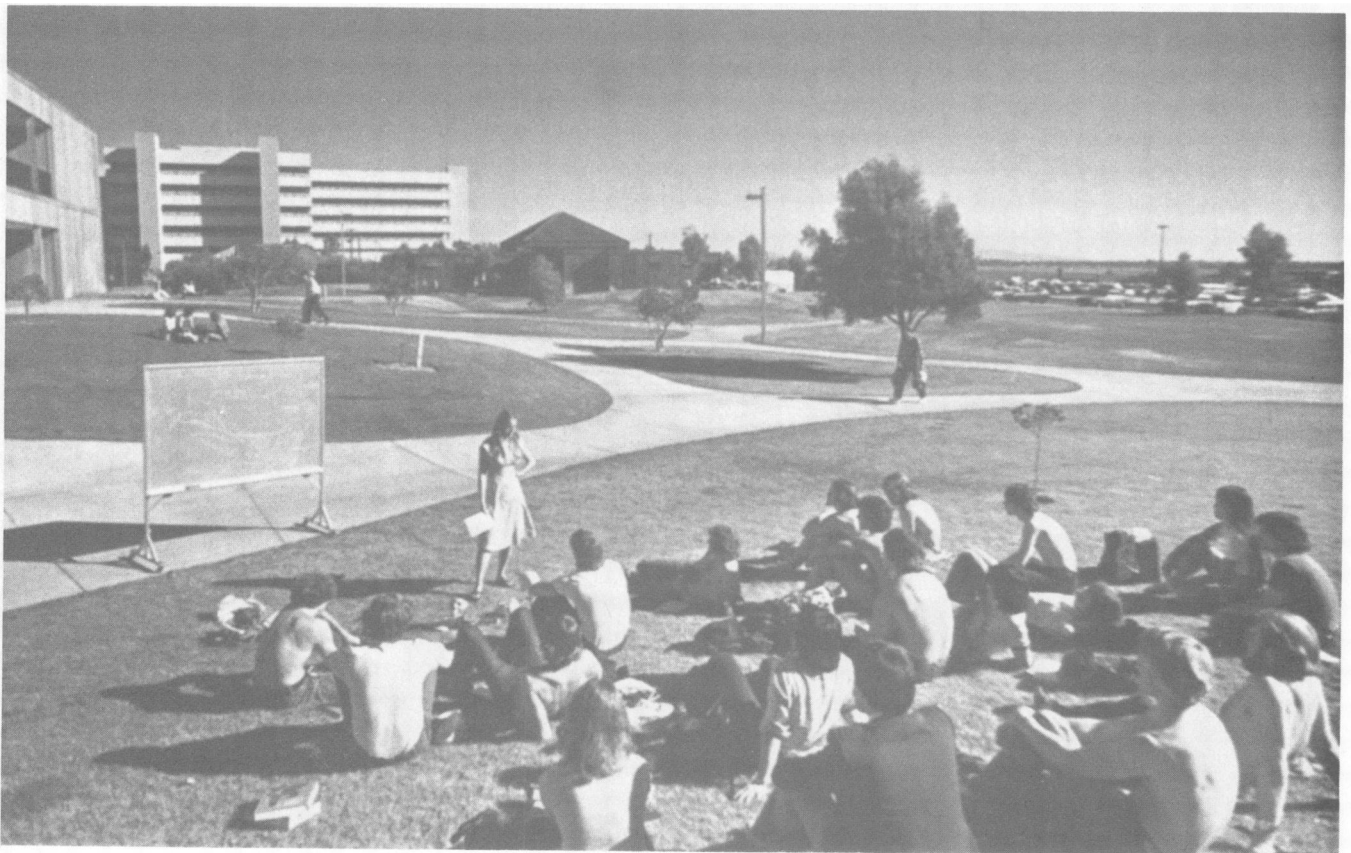
Affiliations also extend to research activities. Fruitful interactions were established with the Salk Institute for Biological Studies and the Scripps Clinic and Research Foundation, both of which border on the campus, with the San Diego Zoo and with Sea World. Research at UCSD has flourished and the School of Medicine consistently ranks among the top four or five medical schools in the nation in terms of research funding per full-time faculty member. A number of National In-

stitutes of Health-supported specialized centers of research and a clinical research center were established.

Simultaneously, the school responded to the expressed social concerns of the 1970s. Successful minority recruitment and student retention programs were instituted; a major community clinic was developed in San Ysidro to serve a large Hispanic population. This clinic was later turned over to the community. Assistance was also given to the development of other community clinics.

In the early 1970s, state and national priorities were focused on the apparent need for greatly expanding the output of physicians. Later in the decade, this concern was redirected toward a perceived specialty maldistribution of physicians. In response to the first, the school expanded its planned steady-state class size from 96 to 128 students. In response to the second, a Family Medicine Program was developed together with general medicine and general pediatrics residency tracks. A Nurse Practitioner/Nurse Midwifery Program was also launched successfully. The County Paramedic Training Program was initiated by the school, and is still carried out under its auspices.

The success of the UCSD medical students is perhaps unparalleled in the development of new medical schools. Starting with the charter class, the students have consistently placed in the upper 10th percentile nationally on Part I of the National Boards. Toward the end of the decade, performance on part II achieved



**Figure 2.**—Anatomy class meets outdoors. The Veterans Administration Hospital is in the background.

and has stayed at the same levels. The applicant pool quickly reached and remains steady at the 4,000+ level. Students and faculty interview about 700 "finalists" annually. This effort contributes significantly to the matriculation of students who are academically qualified to meet the stringent demands of the curriculum, who display the qualities necessary for effective doctor-patient interaction and who have a commitment to the professional and social concerns that the profession must address.

In 1979 the school received the first ten-year accreditation granted by the Liaison Committee on Medical Education.

### The Realities of the 1980s

In the 1980s, medical schools are again adjusting to changing social imperatives. Overproduction of physicians is now a major concern. The health sciences are no longer the darlings of state and federal legislatures. Economic slowdown has forced a reevaluation of the priorities for health professions education, health care and—to a certain extent—health-related research. Sources of capital funding needed for plant renovation and expansion to meet the changing requirements of health care and medical research are increasingly difficult to identify. Major changes occurring in health care financing are likely to work to the disadvantage of academic health centers that offer the most expensive tertiary level care and have major commitments to education. These changes are also affecting the academic medical centers' relationships with their affiliated hospitals.

The UCSD School of Medicine is not exempt from these perturbations. The entering class size has been reduced from 128 to 122 students. A debate is raging about the role, program mix and relative level of house-staff training under the auspices of the academic medical center. Inadequate attention has been paid in these debates to the role of the house staff in providing patient care and in the education of undergraduate medical students; to the interrelationships among the house-staff training programs, and to the need for high-quality graduate medical education opportunities for California graduates (the number of first-year house-staff positions nationally continues to decline in the face of a still rising output of medical school graduates). UCSD now is responsible for the training of 430 house officers including the integrated programs at the Veterans Administration Hospital and at a number of community hospitals.

Despite cutbacks, our commitment to diversified educational and training opportunities remains intact. In 1982-1983, the medical student body numbered 504, of which 26% were women and 27% ethnic minority students. Over the years, changes in the curriculum have included the addition of a requirement for 12 weeks of direct patient care experiences in the fourth year; four of these weeks must be in an outpatient setting. The concentration area requirements have



**Figure 3.**—Gildred Cancer Facility with UCSD Medical Center in the background.

been modified somewhat and are now described as an independent study project that must culminate in a paper or other tangible expression of scholarly accomplishment. After lengthy debate, the pass-fail system may be modified to include honors and high-pass options. The school has primary responsibility for 115 students in graduate programs in pharmacology-physiology, neurosciences and bioengineering, more than 200 research fellows and the nurse practitioner program. In addition, our faculty participates in general campus graduate and undergraduate programs in biology, chemistry and psychology. The medical center accommodates nursing and allied health students in 19 programs associated with 16 other educational institutions. Potentially, the competitive environment could affect our ability to provide clinical training for these students. We also serve as a clinical training site for 16 University of California, San Francisco, pharmacy students. Our formal continuing education programs for physicians are now reaching 6,000 participants annually.

We continue to hold our own in biomedical research. UCSD is the only one of the 49 medical schools founded since World War II to rank among the top 25 medical schools in private and federal support of research. Our Cancer Center, which has functioned as a regental-approved organized research unit since 1979, continues to expand its basic science base while offering ever-increasing opportunities for participation in clinical trials by community oncologists. The Gildred Cancer Facility (Figure 3), which houses a major portion of the Cancer Center activities including the oncology clinic, was dedicated on April 15, 1983. It was made possible by the success of our first local fundraising effort and a National Cancer Institute grant. In March 1983 the regents approved the establishment of

the Institute for Research on Aging. Aging is an area in which we expect major growth in research and creative expansion in teaching and patient care.

We anticipate that the UCSD Medical Center, University Hospital, which was purchased from San Diego County in 1981, will continue to respond imaginatively to the changes in health care financing by both the public and private health sectors and will continue to grow in selected areas. Services as diverse as the Life Flight Helicopter Service, a Medical Center and community-based adolescent medicine program, an Indonesian health education program and a nuclear magnetic resonance facility have recently been or are about to be added.

A small internal medicine clinic is operating near the school on the La Jolla campus. Studies are under way to determine the feasibility of developing a campus hospital or other health care facilities (or both), an indication of our optimism for the future. A campus hospital would address needs that have been expressed since the establishment of the school. These include substantially improving opportunities for clinical research; providing a significantly improved patient mix for teaching, and enhancing private practice opportunities for the faculty. Even if a campus hospital eventually comes into being, UCSD Medical Center in the

Hillcrest area will continue as an integral part of the school's programs.

### Conclusion

Dr Clifford Grobstein's statement in 1972 "that the [medical school] plan underwent metamorphosis rather than disruption is a testimony to its original soundness" can be reiterated 12 years later.<sup>1</sup> The historic challenge to medical schools remains: to maintain high-quality training programs, incorporating in their curricula new knowledge while responding to major societal and environmental changes. In a climate of continuous public pressure for quick solutions in medical education and medical care, and in the face of new threats to the stability of clinical programs, responding to the challenges of the future will require more effort and imagination than ever before. UCSD School of Medicine anticipates meeting this challenge, working with the San Diego community, the local medical profession and the university toward improving its own programs while contributing positively to the formulation of public policy as it affects medical education.

### REFERENCE

1. Grobstein C: University of California, San Diego School of Medicine, *In* Lippard VW, Purcell E (Eds): *Case Histories of Ten New Medical Schools*. New York, Josiah Macy Jr Foundation, 1972, p 118